

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
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# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 29688		Date of mailing (day/month/year) <b>24 MAY 2007</b> <b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. PCT/IL05/00575	International filing date (day/month/year) 01 June 2005 (01.06.2005)	Priority date (day/month/year) 01 June 2004 (01.06.2004)
International Patent Classification (IPC) or both national classification and IPC IPC: <b>G06K 9/00( 2006.01)</b> USPC: Please See Continuation Sheet		
Applicant V-TARGET TECHNOLOGIES LTD.		

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input checked="" type="checkbox"/> | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

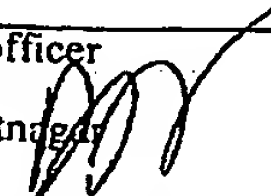
## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options. see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 15 April 2007 (15.04.2007)	Authorized officer Anand Bhatnagar  Telephone No. 571-272-7416
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IL05/00575

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper  
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
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International application No.

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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☒ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☐ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

☐ complied with

☒ not complied with for the following reasons:

See the lack of unity section of the International Search Report (Form PCT/ISA/210)

4. Consequently, this opinion has been established in respect of the following parts of the international application:

☐ all parts.

☒ the parts relating to claims Nos. 1-7, 31, 33-41, 45, 50, 57, 62, 111, and 116 (Species I, V, and VII).

WRITTEN OPINION OF THE  
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International application No.  
PCT/IL05/00575

Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-7, 31, 45, 50, 57, 62, 111, 116 YES  
Claims NONE NO

Inventive step (IS)

Claims 40 YES  
Claims 33-39 and 41 NO

Industrial applicability (IA)

Claims 1-7, 31, 33-41, 45, 50, 57, 62, 111, and 116 YES  
Claims NONE NO

2. Citations and explanations:

Please See Continuation Sheet

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/IL05/00575

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of USPC:

382/128;128/922;250/580,582,583,584,586,590,591,339.06,339.06,341.1,341.2,345,370.09,370.08,393,392;600/11,436,459,462;378/1.2,  
4,5,11,13,14,16,21-27

V. 2. Citations and Explanations:

Claims 1-7 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest: The feature of, regarding claim 1, 6, and 7 "determining a probability that a photon emitted at a voxel, centered at an x;y;z position, in a volume, relative to said radioactive-emission-measuring probe, will be detected by said detecting unit, at a given view, " that in combination with the other respective claim limitations.

Claims 31, 45, 50, 57, 62, 111, and 116 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest: The feature of, regarding claim 31 and similarly claims 45, 50, 57, 62, 111, and 116, "obtaining a second collection of views of the modeled suspected pathology within the modeled body-structure and the modeled anatomical constraints, providing a second scoring function, forming sets of views from the second collection of views and scoring them, with the second scoring function," that, in combination with the other claim limitations.

Claims\* 33-41 lack novelty under PCT Article 33(2) as being anticipated by Rogers et al. (U.S. patent 6,346,706 B1).

Regarding claims 33 and 41: A radioactive-emission-measuring-probe system comprising (fig. 2 elements 28, 32, and 34, col. 1 lines 15-20, and col. 10 lines 23-44, wherein the gantry and camera detectors are read as the probe system since they are probing/imaging the anatomy of a person):

at least one detecting unit, located within the housing and adapted for at least one form of motion with respect to the housing (fig. 2 elements 28, 32 and 34, and col. 13 lines 1-25, wherein elements 32 and 34 are part of the housings along with the gantry, element 28, that contain the camera detectors that detect the photons that are emitted. The gantry rotates to take an image in different directions/views);

at least one motion provider, in mechanical communication with the at least one detecting unit, for providing it with the at least one form of motion (col. 13 lines 1-25 wherein the gantry with the camera detectors rotates. This is controlled by the processor/controller unit. The rotation of the gantry and camera detectors are read as motion.);

a controller, in signal communication with the at least one motion provider, for instructing it regarding said at least one form of motion of the at least one detecting unit, thus automatically providing said at least one detecting unit with said at least one form of motion (col. 13 lines 1-25 wherein the gantry with the camera detectors rotates. This is controlled by the processor/controller unit. The rotation of the gantry and camera detectors are read as motion.).

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Regarding claim 34: The radioactive-emission-measuring-probe system wherein the at least one detecting unit includes a plurality of detecting units, each detecting unit moving independently (col. 17 line 62 to col. 18 line 12).

Regarding claim 35: The radioactive-emission-measuring-probe system wherein the at least one detecting unit includes a plurality of assemblies of detecting units, each assembly moving as a single body, and each assembly moving independently (col. 17 line 62 to col. 18 line 12, wherein each detector is composed of three detectors).

Regarding claim 36: The radioactive-emission-measuring-probe system wherein the at least one detecting unit includes a plurality of lines of detecting units, each line moving as a single body, and each line moving independently (fig. 5 elements 152-154c and col. 17 line 62 to col. 18 line 12, wherein the detectors are in lines).

Regarding claim 37: The radioactive-emission-measuring-probe system wherein the at least one detecting unit includes a plurality of lines of assemblies, each line moving as a single body, and each line moving independently (fig. 5 elements 152-154c and col. 17 line 62 to col. 18 line 12, wherein the detectors are in lines).

Regarding claim 38: The radioactive-emission-measuring-probe system wherein the at least one form of motion with respect to the housing includes at least two forms of motion with respect to the housing (fig. 2 elements 28, 32, 34, and 60, wherein the gantry rotates, i.e. a first motion, and the table moves perpendicular to the gantry, i.e. a second motion).

Regarding claim 39: The radioactive-emission-measuring-probe system wherein the at least one motion provider includes at least two motion providers (see claim 38).